



FIG. 1

The diagram illustrates a chemical process for recovering HF from TA/NB residue. The process begins with the input of TA/NB residue (1) and H₂SO₄ solution (2A) into a reactor (40). The resulting acid leach liquor (2) is then mixed with amine organic (9) and loaded (3) into a column (50A). The leach filtrate (8) is washed with DEHPA (14) and then treated with 10% HCl (11) to produce Zr strip (58A) and U strip (64A). The U strip is further treated with 3M NaOH (17) to produce SC strip (78A). The SC strip is then treated with 250 GPL H₂SO₄ (15) to produce TH scrub (72B). The TH scrub is then treated with 10% HCl (16) to produce leach filtrate without Zr, U, TH, SC (19). The leach filtrate (7) is then treated with water (4A) in a water leach (46) and filtered (48) to produce HF product (5).

FIG. 2